

APPENDIX
A CLEAN SET OF ALL PENDING CLAIMS

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1. (once amended) An improved non-surface activated, non-tacky gel composition comprising: a gel formed from (I) 100 parts by weight of one or more linear, multi-arm, radial, and multiblock copolymers having a selected amount of one or more glassy blocks and a selected amount of one or more elastomeric blocks, wherein said elastomeric blocks comprises one or more substantially crystalline polyethylene components, said block copolymers are characterized by sufficient crystallinity as to exhibit a melting endotherm of at least about 25°C as determined by DSC curve; said glassy blocks selected from polystyrene, poly(alpha-methylstyrene), poly(o-methylstyrene), poly(m-methylstyrene), and poly(p-methylstyrene), wherein the amount of said glassy blocks to said elastomeric blocks of said block copolymers forming said gels having a ratio (a) of at about 37:63 with the proviso that in the event said ratio (a) being less than 37:63, a selected amount of (II) one or more glassy homopolymers selected from the group consisting of polystyrene, poly(alpha-methylstyrene), poly(o-methylstyrene), poly(m-methylstyrene), poly(p-methylstyrene), poly(dimethylphenylene oxide), and one or more of a selected polyethylene-polystyrene interpolymers having a selected polystyrene content are added to form a mixture of said block copolymers and said glassy homopolymers or said interpolymers, wherein said amount of said glassy blocks of said block copolymers and said glassy homopolymers or interpolymers to said elastomeric blocks of said block copolymers forming said gels having a ratio (b) of at least 37:63, wherein said glassy homopolymers having typically an average molecular weight ranging from about 2,500 to about 90,000; and (III) a selected amount of one or more compatible plasticizers sufficient to achieve gel rigidities of from less than about 2 gram Bloom to about 2,000 gram Bloom, wherein said plasticizers having a viscosity cSt @ 40°C of at least not greater than about 30; said gel being formed with or without a major or minor amounts of (IV) one or more selected copolymers, polyethylene-polystyrene interpolymers, or polymers; and wherein said gel having a tackiness of less than about 3 gram Tack.

2. (once amended) An improved non-surface activated, non-tacky gel composition according to claim 1, wherein said glassy homopolymers is a glassy associated phase resins.

3. (twice amended) An improved non-surface activated, non-tacky gel composition according to claim 1, wherein said crystalline components having a selected crystallinity capable of exhibiting in differential scanning calorimeter (DSC) a melting endotherm of about 21°C, 22°C, 23°C, 24°C, 25°C, 26°C, 27°C, 28°C, 29°C, 30°C, 31°C, 32°C, 33°C, 34°C, 35°C, 36°C, 37°C, 38°C, 39°C, 40°C, 41°C, 42°C, 43°C, 44°C, 45°C, 46°C, 47°C, 48°C, 49°C, 50°C, 51°C, 52°C, 53°C, 54°C, 55°C, 56°C, 57°C, 58°C, 59°C, 60°C or higher.

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4. (once amended) An improved non-surface activated, non-tacky gel composition according to claim 1, wherein said copolymer of said gel is formed in combination with or without a selected amount of one or more polymer or copolymer of poly(styrene-butadiene-styrene), poly(styrene-butadiene), poly(styrene-isoprene-styrene), poly(styrene-isoprene), poly(styrene-ethylene-propylene), poly(styrene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene-styrene), poly(styrene-ethylene-butylene), poly(styrene-ethylene-propylene)n, poly(styrene-ethylene-butylene)n, maleated poly(styrene-ethylene-propylene-styrene), maleated poly(styrene-ethylene-butylene-styrene), maleated poly(styrene-ethylene-butylene), maleated poly(styrene-ethylene-propylene)n, maleated poly(styrene-ethylene-butylene)n, polystyrene, polybutylene, poly(ethylene-propylene), poly(ethylene-butylene), polypropylene, polyethylene, polyethyleneoxide, poly(dimethylphenylene oxide), copolymers of trifluoromethyl-4,5-difluoro-1,3-dioxole and tetrafluoroethylene, tetrafluoroethylene, polycarbonate, ethylene vinyl alcohol copolymer, polyamide or polydimethylsiloxane; wherein said copolymer is a linear, branched, radial, or a multiarm copolymer.

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5. A composite comprising an improved non-surface activated, non-tacky gel composition denoted by G being physically interlocked with a selected material M forming the combination $G_n M_n$, $G_n M_n G_n$, $M_n G_n M_n$, $M_n G_n G_n M_n$, $G_n M_n M_n G_n$, $G_n M_n G_n M_n G_n$, $M_n M_n M_n G_n$, $M_n M_n M_n G_n M_n M_n M_n$, $G_n G_n$, $G_n G_n G_n$, $M_n G_n G_n$, $M_n M_n M_n G_n M_n$, $M_n G_n G_n M_n$, $G_n M_n G_n G_n$,

$G_n M_n M_n G_n$, $G_n M_n M_n G_n$, $G_n G_n M_n M_n$, $G_n G_n M_n G_n M_n$, $G_n M_n G_n G_n$, $G_n M_n G_n M_n M_n$, $M_n G_n M_n G_n M_n G_n$, or a permutation of one or more of said G_n with M_n ; wherein when n is a subscript of M , n is the same or different selected from the group consisting of paper, foam, plastic, natural fibers, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G , n denotes the same or a different gel rigidity, said gel composition formed from

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene) n , or poly(styrene-ethylene-ethylene-butylene) n ; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene.

6. A prosthetic device comprising a lower extremity socket insert for below knee or above knee with or without a cuff suspension in combination with a non-surface activated, non-tacky gel composition formed from

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene) n , or poly(styrene-ethylene-ethylene-butylene) n ; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene.

7. A prosthetic device comprising a lower extremity socket insert for below knee or above knee with or without a cuff suspension in combination with a non-surface activated, non-tacky gel composition denoted by G being physically interlocked with a selected material M forming the combination $G_n M_n$, $G_n M_n G_n$, $M_n G_n M_n$, $M_n G_n G_n M_n$, $G_n M_n M_n G_n$, $G_n M_n G_n M_n G_n$, $M_n M_n M_n G_n$, $M_n M_n M_n G_n M_n M_n M_n$, $G_n G_n$, $G_n G_n G_n$, $M_n G_n G_n$, $M_n M_n M_n G_n M_n$, $M_n G_n G_n M_n$, $G_n M_n G_n G_n$, $G_n M_n M_n G_n$, $G_n M_n M_n G_n$, $G_n G_n M_n M_n$, $G_n G_n M_n G_n M_n$, $G_n M_n G_n G_n$, $G_n M_n G_n M_n M_n$, $M_n G_n M_n G_n M_n G_n$, or a permutation of one or more of said G_n with M_n ; wherein when n is a subscript of M, n is the same or different selected from the group consisting of foam, plastic, natural fibers, fabric, or synthetic fibers; and wherein when n is a subscript of G, n denotes the same or a different gel rigidity, said gel composition formed from

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene)_n, or poly(styrene-ethylene-ethylene-butylene)_n; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene.

8. A face mask comprising a composite formed from an improved non-surface activated, non-tacky gel composition denoted by G being physically interlocked with a selected material M forming the combination $G_n M_n$, $G_n M_n G_n$, $M_n G_n M_n$, $M_n G_n G_n M_n$, $G_n M_n M_n G_n$, $G_n M_n G_n M_n G_n$, $M_n M_n M_n G_n$, $M_n M_n M_n G_n M_n M_n M_n$, $G_n G_n$, $G_n G_n G_n$, $M_n G_n G_n$, $M_n M_n M_n G_n M_n$, $M_n G_n G_n M_n$, $G_n M_n G_n G_n$, $G_n M_n M_n G_n$, $G_n M_n M_n G_n$, $G_n G_n M_n M_n$, $G_n G_n M_n G_n M_n$, $G_n M_n G_n G_n$, $G_n M_n G_n M_n M_n$,

$M_n G_n M_n G_n M_n G_n$, or a permutation of one or more of said G_n with M_n ; wherein when n is a subscript of M , n is the same or different selected from the group consisting of paper, foam, plastic, natural fibers, fabric, metal, metal foil, concrete, wood, glass, glass fibers, ceramics, synthetic resin, synthetic fibers or refractory materials; and wherein when n is a subscript of G , n denotes the same or a different gel rigidity, said gel composition formed from

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene) $_n$, or poly(styrene-ethylene-ethylene-butylene) $_n$; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene.

9. A dental floss comprising a non-surface activated, non-tacky gel composition in the form of a strand, a thread, a tape, or a yarn formed from

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene) $_n$, or poly(styrene-ethylene-ethylene-butylene) $_n$; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene.

10. An improved non-surface activated, non-tacky gel comprising a gel formed from

(i) 100 parts by weight of one or more copolymers having a selected amount of one or more elastomeric segments and a selected amount of one or more glassy segments, said elastomeric segments having a selected amount of one or more crystalline poly(ethylene) components and said glassy segments being a poly(styrene);

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being optical clear and non-tacky to the touch, wherein said non-tacky property being achieved by a combination of said selected amount of crystalline poly(ethylene) components, said selected amount of said poly(styrene) components, and a one or more plasticizers having a Viscosity cSt @ 40°C of less than 30, wherein said elastomeric segments and said poly(styrene) segments having a ratio of at least 37:63 and said tack of said gel being substantially less than amorphous gels of poly(styrene-ethylene-butylene-styrene) or poly(styrene-ethylene-propylene-styrene) of substantially same rigidities.

11. An gel comprising:

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-butadiene-styrene), poly(styrene-butadiene)_n, poly(styrene-isoprene-styrene), poly(styrene-isoprene)_n, poly(styrene-ethylene-propylene)_n, poly(styrene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene-styrene), poly(styrene-ethylene-butylene)_n, poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene)_n, poly(styrene-ethylene-ethylene-butylene)_n, maleated poly(styrene-ethylene-propylene-styrene), maleated poly(styrene-ethylene-butylene-styrene), maleated poly(styrene-ethylene-butylene)_n, maleated poly(styrene-ethylene-propylene)_n, or maleated poly(styrene-ethylene-butylene)_n; said gel being formed in combination with or without one or a mixture of two or more of a selected amount of a poly(ethylene-styrene)

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interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or a mixture of two or more polymers of polystyrene, polybutylene, poly(ethylene-propylene), poly(ethylene-butylene), polypropylene, polyethylene, polyethyleneoxide, poly(dimethylphenylene oxide), copolymers of trifluoromethyl-4,5-difluoro-1,3-dioxole and tetrafluoroethylene, tetrafluoroethylene, polycarbonate, ethylene vinyl alcohol copolymer, polyamide or polydimethylsiloxane.

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cm 12. An gel comprising:

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-propylene)_n, poly(styrene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene-styrene), poly(styrene-ethylene-butylene)_n, poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene)_n, poly(styrene-ethylene-ethylene-butylene)_n, maleated poly(styrene-ethylene-propylene-styrene), maleated poly(styrene-ethylene-butylene-styrene), maleated poly(styrene-ethylene-butylene)_n, maleated poly(styrene-ethylene-propylene)_n, or maleated poly(styrene-ethylene-butylene)_n; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, poly(ethylene-propylene), poly(ethylene-butylene), polypropylene, polyethylene, polyethyleneoxide, poly(dimethylphenylene oxide), copolymers of trifluoromethyl-4,5-difluoro-1,3-dioxole and tetrafluoroethylene, tetrafluoroethylene, polycarbonate, ethylene vinyl alcohol copolymer, polyamide or polydimethylsiloxane.

13. An gel comprising:

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-propylene)_n, poly(styrene-ethylene-propylene-styrene), poly(styrene-ethylene-butylene-styrene), poly(styrene-ethylene-butylene)_n, poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene)_n, or poly(styrene-ethylene-ethylene-butylene)_n; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene, polyethyleneoxide.

14. An gel comprising:

(i) 100 parts by weight of one or a mixture of two or more of a linear, branched, radial, or a multiarm block copolymer of poly(styrene-ethylene-ethylene-propylene-styrene), poly(styrene-ethylene-ethylene-butylene-styrene), poly(styrene-ethylene-ethylene-propylene)_n, or poly(styrene-ethylene-ethylene-butylene)_n; said gel being formed in combination with or without one or more of a selected amount of a poly(ethylene-styrene) interpolymer made by metallocene catalysts, using single site, constrained geometry addition polymerization catalysts;

(ii) from about 250 to about 1,600 parts of a plasticizer sufficient to achieve a gel rigidity of from less than about 2 gram Bloom to about 1,800 gram Bloom;

(iii) said gel being formed with or without a major or minor amount of one or more polymers of polystyrene, polybutylene, polypropylene, polyethylene.